REVISED 2/10

LSUE COURSE SYLLABUS

I.	PHSC 1001	Instructor: Science Faculty

II.	Course description from the current LSUE catalog:

1001 Physical Science. Lec. 3 Cr. 3.

A survey course covering topics in physics such as mechanics, electricity and magnetism, optics, thermodynamics, and astronomy. Attention is given to recent discoveries and applications. This course is not intended for students who wish to pursue further work in these areas and may not be substituted for the basic course in these fields.
Prerequisite: Eligibility to schedule Mathematics 1021(College Algebra) or consent of the Head, Division of Sciences and Mathematics

III.	Textbook(s) and other required materials:

Physical Science, 8th edition, Tillery, B. W., McGraw Hill.

Supplementary Reference Video Tapes:

1.	Introduction to conceptual physics	VT 596
2.	Energy	VT 598
3.	Atoms	VT 597
4.	Gases	VT 599
5.	Momentum	VT 684
6.	Center of gravity	VT 685
7.	Rotation	VT 686
8.	Heat, Temperature, and Expansion	VT 687
9.	The Particle Model (Humanities/Sciences)	VT 989
10.	Mater Waves (Humanities/Sciences)	VT 990
11.	The Wave Model (Humanities/Sciences)	VT 991
12.	The Quantum Idea (Humanities/Sciences)	VT 992
13.	The Electromagnetic Model (Humanities/Sciences)	VT 993
14.	Photons (Humanities/Sciences)	VT 994

Physical Sciences, Tillery, B. W., Wm/C. Brown Publishing Company.

IV.	Evaluation/grading (policy and basis; number and frequency of tests and papers; weights of particular tests or papers; etc.):

During a semester, homework (worth 100 points), three one hour exams (each worth 100 points) and one two hour comprehensive final exam (worth 200 points) will be given. Out of this total 600 points, 90% and up will earn an A. 80% to 89% will receive

a B, 70% to 79% a C, 60% to 69% a D, and below 60% will receive an F. Quizzes will be given on the random basis out of the materials covered in prior session.

Homework will not be accepted late. The two lowest homework grades will be dropped. Make-up exams will not be scheduled. The lowest exam grade will be dropped. If an exam is anticipated to be missed with an excused absence, the student may take the exam BEFORE it is given to the class.

V. Course objectives:

A. Comprehend the trends in scientific thought and consequences which have resulted.
B. Observe how science has played an important role in history
C. Observe the influences science is making in our present day modern world.
D. Probe some of the basis philosophical aspects of various ideas.
E. Develop the scientific method of inquiry in his everyday search for fact.
F. Observe that the areas of physical science are factual, based on observation of material things and natural phenomena and supplemented by experimentation.
G. Use facts and information for the development and comprehension of basic ideas and principles rather than for the mere memorization of single unconnected events.

VI. Major instructional objectives:

Since the course is intended primarily for students whose major interests are non-scientific (i.e., humanities, social sciences, education and commerce), it has been programmed to include material from the various disciplines so as to develop for the student a basic but non-technical survey of the physical sciences. This objective should serve to compliment the student's other course selections and provide him/her with a broad spectrum of knowledge for a well-rounded general education.

VII. Brief summary of course content by major units of instruction:

1. Measurement
    a. Concepts and Fundamental Quantities, Derived Quantities, Standard Units
    b. Experimental Error
    c. Powers-of-Ten Notation
    d. Description of the "scientific method"
2. Motion
    a. Description of motion, speed, units, velocity, acceleration
    b. Acceleration of gravity, free fall, Galileo
    c. Analysis of motion, uniform circular motion, projectile motion
    d. Vectorial and scalar quantities
3. Force and Motion
    a. Inertia, first law, mass

   b. Force, Acceleration, second law, units
   c. Third law, Newton's Law of Gravitation, momentum
4. Energy and Momentum
   a. Work, units, power
   b. Energy, kinetic, and potential, conservation of energy
   c. Momentum, linear, rockets, angular
5. Heat and Temperature
   a. Temperature and units
   b. Heat, specific heat, units, change of state
   c. Nature of heat
   d. Bulk matter, solids, liquids, gases
   e. Pressure, Gas Laws
   f. Kinetic theory of gases, Kelvin
   g. Heat-Energy of gases, change of state
   h. 2^{nd} law of Thermodynamics
6. Waves
   a. Wave motion, sound, wave properties
   b. Behavior, refraction and reflection
   c. Sound waves, electromagnetic waves
   d. The Doppler Effect
7. Wave Effects
   a. Electromagnetism, Speed of light
   b. Light, reflection, and refraction
   c. Color, Diffraction, Interference
8. Electricity and magnetism
   a. Electric charge, Electrons
   b. Coulomb's law, Ohm's law
   c. Force fields
   d. Permanent magnets, force, dipoles
   e. Fields, forces, induction

ADS	Americans with Disabilities Act) Statement

Any student who is a "qualified individual with a disability" as defined by Section 504 of the Rehabilitation Act and Title II of the ADA, and who will need accommodated services (e.g., note takers, extended test time, audiotape, tutorials, etc.) for this course must register and request services through the Office of Academic Assistance Programs, S-150.

CSD	CODE OF STUDENT CONDUCT

LSUE enforces discipline on campus to protect the academic environment of the campus and the health and safety of all members of the University community. To accomplish this objective, the University enforces standards of conduct for its students. Students who violate these standards can be denied membership in the LSUE community through imposition of disciplinary sanctions.

The LSUE Code of Student Conduct can be found on the LSUE website (lsue.edu). Follow the “Current Students” link from the homepage, and then click on “Student Handbook.”